

ABSTRACT

5 A novel fuel cell uses carbohydrates, alcohols or other organic fuels as its fuel to generate electricity via an electrochemical reaction. To catalyze the electrochemical reaction in the fuel cell and reduce the likelihood of the anode of being poisoned by by-products from the electrochemical reaction and impurities in the fuel, an anode material with molecular recognition sites for the fuel is used in the fuel cell. The anode material is synthesized using a hydrothermal synthesis technique with the fuel as a template. A method of generating electricity using this fuel cell is also disclosed.